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ABSTRACT

Summaries of research findings tracing the development and use of a battery of diagnostic instruments for the assessment of self-concept and motivation in students and teachers are presented. The inventory measures factors such as self-adequacy, personal investment, role expectations, and goal needs. Part one deals with findings on students from preschool to university undergraduates from 1962 to 1977. In the second part, research focuses on teachers from all levels in the time period of 1973 to 1977. This document is an update of a previous work written in 1975. (JD)

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An Annotated Bibliography of Research Concerning The Self-Concept and Motivation Inventory (SCAMIN)

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Revised November 20, 1977

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Note

This annotated bibliography is divided into two parts. First, the section designated as "Part I" deals primarily with SCAMIN research ranging from pre-school to university undergraduate students from 1962 to 1977.

In "Part II", the SCAMIN research focuses exclusively on teachers from all levels in the time period of 1973 to 1977.

Random Notes on the Self-Concept and Motivation Inventory (SCAMIN) Research

1. Roth, by 1970, had independently validated the later Elementary form with a semantic differential of "self." Here, the most interesting finding was that the SCAMIN Self-Concept was highly correlated with the semantic differentials of "self, white people" and "black people." Hence, self-concept, racial pride, and acceptance of another's race are all highly interrelated.

1.1 Roth also found that black studies were less effective in segregated rather than integrated situations in developing self-concept and racial pride, and acceptance.[1]

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1 In both of the above cases, for further information, see: R. W. Roth, "How Negro fifth grade students view "black pride" concepts, Integrated Education, 1970, 24-27.

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2. Burke found that third grade teachers could not rate self-concept or creativity in their students, but, rather, they rated their students in terms of high achievement. Self-concept had a slight correlation with Torrance's verbal fluency - creativity factors. However, the correlation between the directions for taking SCAMIN "as I really am" and "how I'd like to be " was .77.[2]

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2 Barbara Patricia Burke, "Exploratory Study of the Relationships among Third Grade Negro Children's Self-Concept, Creativity, and Intelligence, and Teachers' Perceptions of Those Relationships," Unpublished doctoral dissertation, Wayne State University, Detroit, Michigan, 1969, pp. 1-176.

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3. Milchus used very specific instructions by rating the students and discovered a perfect +1.00 correlation with the high and low extremes of the teachers' rating, and the high and low forms of the test of self-adequacy. The match was significant at the .001 level despite a very small sample. Low ratings and test scores correspond better than high ones.

3.1 Brake and Milchus found that the factor of failure avoidance (FA) predicted about 10% of the variance of reading achievement in the first grade. While this figure is a small amount, it is still an independent predictor unrelated to 27 other perceptual factors. Only broken homes were slightly related to the low SCAMIN scores.[3]

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[3] Norman J. Milchus and Rachael Brake, Wayne County Intermediate School District, Wayne County, Michigan, 1969-1970.

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4. Farrah, Milchus, and Reitz found that among all black student populations tested in the inner city, failure avoidance is generally lower and self-adequacy slightly higher than middle class white students. In almost all of the non-SCAMIN studies that have been examined in compensatory education, the factor of self-adequacy drops after extensive counseling. Students who have inflated self-concepts tend to lower them to realistic or anxious levels. Therefore, it is advised that the inflated "denial profile" scores be separated and analyzed apart from the others.[4]

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[4] George A. Farrah, Professor of Educational Administration, St. Cloud State University, St. Cloud, Minnesota, and William Reitz, Professor of Evaluation and Research (and Dept. Chairman) Wayne State University, Detroit, Michigan.

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5. Muth and Spuch used SCAMIN with Mexican-American gifted students in junior high schools of the Los Angeles Public Schools and found SCAMIN scores good predictors of STEP scores. Students who felt pressures also had low self-adequacy scores from the high standard sets.[5]

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[5] In addition to these research studies within the junior high schools, other studies, particularly within the larger Metropolitan area of Detroit, have been made of high school students.

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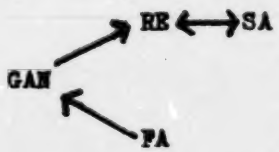
6. Farrah and Milchus discovered that profile analysis is about 85% to 90% accurate with teacher agreements. Approximately 400 profiles were examined and described as "denial," "protective," "low," "secure," and received teacher and principal agreement and obtained agreement on every type except the "security profile." In this respect, teachers would comment, "he's not secure," or "he's lazy." The security profile appeared only when the high scores of Goal Needs, Role Expectations, and Self Adequacy were above the median and when achievement was normal. Hence, The lower profile shapes were defined as "placid," in order to account for all those "lazy"students with good mental health. Apparently, the factor of self-concept goes down steadily as children proceed through the grades. Moreover, the factors of Role Expectations and Self Adequacy are more highly correlated - particularly in the primary - kindergarten form. Goal Achievement Needs (GAN and now GN) correlates more highly with Self-Concept than Failure Avoidance suggesting a <u>general academic self-concept</u> factor with Failure Avoidance related to Goal Achievement Needs, but not to self-concept. This relationship exists among the four factors:



It may be observed that, of the four factors, Failure Avoidance is the most consistent, accurate predictor of academic achievement, even in the kindergarten-primary form. Consequently, the factor of Failure Avoidance is now termed (FI) the child's personal academic investment in achievement, because Failure Avoidance is too easily confused with failure anxiety.

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7. John Skoog, in an exciting experiment with Indian children on a north central Minnesota Reservation, utilized the SCAMIN profile analysis with amazing accuracy. He discovered after extensive testing and analysis, that the only child with a high anxiety profile was his own son - the only white child in this elementary school.[7]

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[7] John R. Skoog, Teaching Principal, Mille Lacs Elementary School, Mille Lacs, Minnesota, May, 1970.

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8. Farrah, in a most recent nationwide study, was able to apply and synthesize the "global variable" of self-concept via an academic relevancy inventory. First, utilizing the theoretical constructs (i.e., Self-Adequacy, Role Expectations, Personal Investment, and Goal Achievement Needs) which form the basis for SCAMIN, his pilot study revealed a reliability coefficient of .85 for the total inventory. Second, with the cooperation of 19 institutions of higher learning, the inventory was administered - as a replication model of the pilot study - to 1300 participating undergraduate students. Since the 40 items were constructed by students themselves, the results reveal that self-concept and motivation are the crucial variables of academic relevancy - especially within the framework of a person - time - space continuum.

8

George Farrah, Preliminary Report: An Analysis of a Pilot Study Relating To Academic Relevancy at St. Cloud State College, St. Cloud, Minnesota, September, 1970. For an interesting probe of the "global variable" idea of self-concept, see: C.M. Kubiniec, "The relative efficacy of various dimensions of the self-concept in predicting academic achievement," American Educational Research Journal, 1970, 7, 321-335.

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9. Farrah, in another recent study involving undergraduate and graduate students, employed a modified form of SCAMIN specifically for education majors or experienced teachers. In repeated sampling, he has found significant differences in the self-concept (i.e., Self-Adequacy, Role Expectations, and Goal Achievement Needs) at the .05 level - of undergraduate education majors as compared to experienced teachers. It appears that, the longer one teaches, the greater the chance that the self-concept (especially goal achievement needs) will be lowered.[9]

9

It should be quite clear to the reader that various forms of SCAMIN have been successfully applied throughout the United States, including the states of Hawaii and Alaska. Most crucial, it has been approved by the United States Office of Education for use in public schools because it does not invade the privacy of the individual. This latter fact (i.e., the lowering of the self-concept) agrees with the finding noted on page 6 number 6.

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10. Schwinghamer, in a study involving forty first grade boys and girls, utilized a test-retest design to discover the relationship between reading and self-concept. A high, positive correlation (.05 level) was found to exist between the post-test scores in the Gates-Mac Ginitie Reading Tests, and the post-test scores in Goal and Achievement Needs, Role Expectations, Self-Adequacy, and Self-Concept. Specifically, there was a significant positive correlation between Achievement Investment (Failure Avoidance) and achievement in reading.

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10 Patricia Ann Schwinghamer. The Relationship Between Reading and the Self-Concept. Unpublished Master's Thesis. St. Cloud University, August, 1974. 67p.

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11. Abel utilized SCAMIN in a pre and post-test setting with a total of 92 students, who were later divided into six subgroups for the purposes of an ex-post facto statistical analysis. These groups included: Grade 4 females, Grade 4 males, Grade 5 females, Grade 5 males, Grade 6 females, and Grade 6 males. Another special feature of the sampling included a "Special Group" drawn from the aforesaid six groups. These students were, according to SRA reading scores, functioning at a level which was two years below their grade.

The major findings indicated that: 1) The greatest change occurred in Grade 4 males, whose scores showed significant growth in both Self-Adequacy and Role Expectations. For example, in Self-Adequacy, the mean scores increased 6.90 points, while, in Role Expectations, the mean scores had increased by 6.50 in the time interval from fall to spring, 2) In three of the four factors measured by SCAMIN, the Grade 4 males produced higher scores than Grade 4 females, 3) The Grade 6 females scored higher in Achievement Needs and Achievement Investment, and 4) The group of students who were designated as the "Special Group" revealed highly significant changes in their SCAMIN scores.

Abel suggested that the significant differences noted within groups and between sexes might be due to the lack of pressure inherent in this program of personalization. Apparently, by making this kind of academic progress, those children had enhanced their feelings of self-concept and motivation.

11

Marian L. Able, Personalizing the Social Studies Curriculum for an Intermediate Non-Graded Unit at Lincoln School in Elk River, Minnesota, Unpublished Master's Thesis, St. Cloud State University, November 1976.

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12. Klundt's study focused on the statistical relatedness between specific institutional variables and all the subfactors of the Self-Concept and Motivation Inventory. The population under study were students committed to a major child care institution providing care, training, and treatment for juvenile delinquerts. Students came from the more rural portion of the state.

Klundt found that: 1) Age had a negative relationship with SCAMIN profile scores, 2) Assigned program value had a negative relationship with SCAMIN profile scores, 3) Reading achievement gain had a negative relationship with SCAMIN profile scores, 4) Arithmetic achievement gain had a negative relationship with SCAMIN profile scores, 5) Length of stay in the institution had no significant relationship with SCAMIN profile scores, 6) Number of pre-institutional placements had no significant relationship to SCAMIN profile scores, 7) Number of negative incident reports had a positive relationship with SCAMIN profile scores, 8) Number of positive incident reports had a positive relationship with SCAMIN profile scores, 9) Title I composite scores had a negative relationship with SCAMIN profile scores, 10) Number of placements in the security cottage had a positive relationship with SCAMIN profile scores, and 11) Size of the students' home school had no significant relationship with SCAMIN profile scores.

12

William C. Klundt. A Study of Self-Concept/Motivation and Juvenile Correctional Institution Programmatic Variables. Unpublished Field Study. St. Cloud State University, 1977. 150p.

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Part II

SCAMIN Research Reported on Teachers, 1973-1977

Background

Utilizing the author's instrument, a series of pilot studies have been performed in various academic settings to compare teacher self-concept and motivation as measured by SCAMIN.

Under the direction of the author, each pilot study was set in a different type of academic environment to determine whether or not certain factors in the academic climate had a differential effect on teacher self-concept and motivation, and whether or not there were patterns occurring among the significant differences in the personal characteristics of sex, age, level of teaching, and years of experience.

The combined samples of these investigators, probing all three levels of teaching, total 602. With the exception of one sample conducted in an inner-city setting of a large Wisconsin city, the population samples were drawn from both rural and urban communities of the north central Minnesota area, on both a city and county basis. The techniques of both random and stratified sampling were involved.

In all cases, no efforts were directed to methodological studies of improving self-concept and motivation in the teacher population. Rather, the emphasis was on descriptive studies within rural and urban cities, ranging in size from 1234 to 637,392, from which setting the samples were drawn.

A listing of the investigator's research, purpose and findings is provided below.

1.0 Florence M. Anderson. A Descriptive Study of Teacher Self-Concept and Motivation Associated With Academic Climate and Their Relationship to Certain Personal Characteristics.

(Florence M. Anderson, continued)
Unpublished Doctoral Dissertation. University of Minnesota, August 1975. 310p. Dr. Anderson examined the two broad concepts of teacher self-concept and motivation in the academic and social climate in which teachers interacted, in an ex-post-facto design, which utilized a one-test only situation.

Anderson found that:

1.1 In terms of Sex, the male had the highest score on each of four sub-scales for which there was a significant difference (i.e., $p \leq .01$). These were personal investment, pupils' parents, activity climate, and academic activity. On personal investment, the male was apparently less adversely affected by disapproval and lack of esteem by the significant others. The female had the highest personal investment in the teaching role in terms of pupil orientation. On the other hand, the male was more favorably influenced by his perceived recognition and status accorded to him by the pupils.

1.2 The factor of Age, in respect to the goal needs and activity climate sub-scales, was significant (i.e., $p \leq .01$) to the teacher in the 21 to 29 age category. In this interval, the teacher is highly motivated by praise and recognition bestowed by the significant others. The 30 to 38 category had the lowest mean scores on the aforesaid sub-scales.

1.3 In relation to the factor of Level, there was a significant difference (i.e., $p \leq .01$), on the mean responses to administration, other teachers, activity climate and academic activity. The senior high school level had the highest mean score on each of the five sub-scales for which there was a significant difference. Conversely, on personal investment, the elementary teacher had the highest scores in the teaching role pertaining to pupil orientation.

Yet the senior high school level was the most highly motivated by praise and recognition given by the administration and other teachers. It was the most favorably affected by its perceived success in classroom techniques and school associated activities. It was also the most highly motivated by its own academic achievements.

On the self-adequacy variable, the three levels of teaching perceived themselves with similar regard and esteem as viewed by the significant others. They had a similar regard for their own probability of success. They similarly accepted the demands and expectations of the teaching role, and had similar attitudes about school and their work in the school. They were similarly motivated according to the intrinsic and extrinsic rewards of teaching. They were similarly affected by the recognition and approval accorded them by the pupil's parents and pupils.

1.4 The factor of Experience was significant (i.e., $p \leq .01$), for the category of less than one year. This category had the highest mean score on each of the nine sub-scores for which there was a significant difference. The category of 7 to 12 years had the lowest mean score on five of the nine sub-scales.

Teachers in the less than 1 year of experience category were the most highly motivated to fulfill their roles as a result of the intrinsic and extrinsic rewards of teaching. They were the most favorably influenced by the approval and recognition of the administration, pupils' parents, other teachers, and pupils. They were the most favorably influenced by the perceived success of their classroom and school associated activities, their own academic achievements, and the perceived recognition given to them for these accomplishments.

However, on the personal investment sub-scale, the 1 to 6 years of experience category had the highest personal investment scores in the teaching role in terms of commitment to the pupil and to pupil achievement.

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2.0 Harold W. Hines. A Study of Teacher Self-Concept and Motivation in a Middle Class, Small City High School. Unpublished Field Study. St. Cloud State University, 1973. 403p.

The design utilized in this study involved pre-test and post-test assessment for the purpose of assessing the relationship of teacher self-concept and motivation with administrative style. Initial assessment was made prior to the school principal going on a leave of absence with post assessment being made at the end of the one-year period. The sampling involved a middle class, small city high school in north central Minnesota.

Hines concluded that, from analysis of pre-test scores, teachers:

2.11 Did not feel any great probabilities of success when dealing with other teachers.

2.12 Felt other teachers regarded them with low esteem.

2.13 Felt that the administration held them in high esteem.

2.14 Seem to be humble about personal achievements.

2.15 Tend to be self-centered, concerned primarily with their specific subject area and have a low activity climate.

2.16 Tend to feel successful in their teaching endeavors; therefore increasing personal investment in their profession.

2.17 Tend to have a high regard for pupils.

-From analysis of post-test scores, teachers:

2.21 (Same as Pre)

2.22 (Same as Pre)

2.23 Felt that the administration held them in low esteem.

2.24 Felt less motivation towards pupils and their role expectations were low.

2.25 Seem to be humble about personal achievements, but very low in their feelings of self-adequacy.

2.26 (Same as Pre)

2.27 Tend to be self-centered, concerned primarily with their specific subject area, goal needs, and activity climate.

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3.0 Robert Olson. A Study of Teacher Self-Concept and Motivation and Its Relationship to Social Class. Unpublished Field Study. St. Cloud State University, 1974. 34lp.

Olson's utilized a one-test only design, administered at the end of the school year, for the purpose of assessing teacher self-concept and motivation in its relationship to social class. The teaching staff and student body contained in this sample, had a population who came from the surrounding rural community and also commuters (i.e., parents) to a large metropolitan area in central Minnesota.

Olson found that:

3.1 The most significant finding as a result of this study is that the small school faculty generally scored lower than the suburban school.

3.2 When raw mean scores were applied to criterion variables, on the average, 71% of the time, the suburban school scored higher than the small school.

3.3 The suburban school faculty:

3.31 Did not feel any great probabilities of success when dealing with other teachers.

3.32 Felt that other teachers regarded them with low esteem.

3.33 Felt that the administration held them in high esteem.

3.34 Tended to be self-centered, concerned primarily with their specific subject area.

3.35 Tended to feel successful in their teaching endeavors, therefore, increasing the personal investment in their profession.

3.4 While the latter two findings (i.e., 3.34 & 3.35) were also typical of the small school faculty, these additional findings were also noted, namely, that the small school faculty:

3.41 Felt that there were great probabilities of success when working with other teachers.

3.42 Felt that other teachers regarded them with high esteem.

3.43 Felt that the administration held them in low esteem.

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4.0 David C. Groth. A Comparison of Teacher Self-Concept and Motivation in an Urban High School With an Inner-City Minority High School. Unpublished Field Study. St. Cloud State University, 1974. 370p.

In this particular design, Groth used a one-test only design for the purpose of comparing teacher self-concept and motivation in an urban middle class school with an inner-city minority school. In this case, the Blacks on the faculty were in the minority. Otherwise, the population emanated from a large urban area in Wisconsin as compared with an urban area of middle class teachers in north central Minnesota.

Groth concluded that:

4.1 Both inner-city and suburban school teachers have invested considerable energy in their dealings with their profession. They apparently felt successful and have dedicated their lives to educating youth. However, the inner-city faculty had a lower self-concept than did the suburban school faculty.

4.2 In terms of predictor variables as sex, age, and experience contrasted to the criterion variable of the items in the questionnaire, the canonical variance was as follows:

4.21 Sex accounted for 33 percent of the variance.

4.22 Age accounted for 21 percent of the variance.

4.23 Experience accounted for 13 percent of the variance.

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5.0 Lyndon J. Sonju. A Study of the Academic Self-Concept and Motivation of a Suburban Middle Class High School. Unpublished Study. St. Cloud State University, 1975. 279p.

Sonju employed a one-test only design to measure the academic self-concept and motivation of a suburban middle class school faculty. The questionnaire, given during the fall, involved a staff of one hundred-thirteen teachers.

Sonju found that, in a companion study to Olson's (i.e., see number 3 above), the suburban school faculty:

5.1 Did not feel any great probabilities of success when dealing with other teachers.

5.2 Felt that other teachers regarded them with low esteem.

5.3 Felt that the administration held them in high esteem.

5.4 Tended to be self-centered, concerned primarily with their specific subject area.

5.5 Tended to feel successful in their teaching endeavors, therefore, increasing the personal investment in their profession.

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6.0 Sally Ekola. A Study of the Effect of Program Treatment on Self-Concept and Motivation of Elementary and Secondary Teachers. Unpublished Study. St. Cloud State University, 1974. 115p.

Employing an ex-post-facto design, Ekola analyzed pre and post-test SCAMIN scores from elementary and secondary teachers. In this unique situation, she was able to study the effects of a human relations-program which occurred between the pre-testing and the post-testing. Ekola's sample was from a small conbined rural-urban population of 6,318 in north central Minnesota.

Ekola discovered that:

6.1 Post-test mean scores were lower on all sub-score clusters with no significant differences occurring among the predictor variables of sex, age, level, and experience.

6.2 Self-adequacy was the lowest factor with no significant differences occurring on the sex variable.

6.3 The only significant difference on the age variable was in the 30-38 years of age category.

6.4 The factor of Personal Investment contained the highest scores. (i.e., scores on this column factor were the highest).

6.5 Elementary teachers' mean scores were higher than secondary teachers' mean scores at the $p \leq .05$ level of significance on personal investment, role expectations, and goal needs.

6.6 There were no significant differences among the five categories of experience.

6.7 Implications indicated that this particular program in human relations did not enhance self-concept and motivation because, in the post-test, the scores were lower in all instances, and no significant differences occurred among the predictor variables.

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7.0 George A. Farrah, Focusing on Teachers' Self-Concept and Motivation. Submitted to the American Association of Colleges for Teacher Education, an Awards Program for Outstanding Writing, November 14, 1977.

In a study of 76 teachers from the Twin Cities area and north central Minnesota, Farrah developed a profile analysis of their results from the ten SCAMIN subscales. The samples involved elementary, junior, and senior high teachers, who were approximately equal in numbers for the characteristics of sex, age, and years of experience.

Unique to this study was the fact that, before the administration of the SCAMIN instrument, all 76 teachers were designated as outstanding by principals, counselors, parents, secretaries, and custodial help.

Farrah concluded that:

7.1 On the factors of Personal Investment and Goal Needs, both components of Motivation, this stratified group exhibited high scores, regardless of the characteristic (i.e., sex, age, level, or experience).

7.2 Comparisons were made of the mean sub-cluster scores with samples drawn from a total sample of 572 Minnesota teachers who had taken SCAMIN. In effect, several random samples, equalling 76 teachers, with identical characteristics and numbers in terms of sex, age, level, and experience were generated with these results:

7.21 An analysis of means of the Outstanding Teachers versus the randomly selected groups indicated that the former exceeded the latter in all cases (i.e., significant at $p \leq .05$).

7.22 The most interesting contrasts occurred between comparisons of Total Scores for the characterisitcs of Age and Experience. Whereas the particular interval (i.e., of Ages 30-38 and 7-12 years of Experience) represents some of the lowest scores for the general population of 572 teachers, the mean scores for the latter intervals were significantly higher (i.e., $p \leq .05$) than the population mean scores.

7.3 When teachers are outstanding, the characteristics of sex, age, level, and experience are not important in their self-concept and motivation.

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